Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Missile Defense Agency										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*				R-1 ITEM NOMENCLATURE PE 0604884C: *Airborne Infrared (ABIR)*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	71.550	-	-	-	-	-	-	-	-	0.000	71.550
MD67: *Airborne Infrared (ABIR)*	71.550	-	-	-	-	-	-	-	-	0.000	71.550

Note

In the Consolidated Appropriation Act of FY 2012 (Public Law 112-74), the Airborne Infrared (PE 0604884C) has zero funding. The Agency will conduct an orderly drawdown of the program.

A. Mission Description and Budget Item Justification

Since March 2009, the Airborne Infrared Sensors program office, in conjunction with the Office of the Secretary of Defense, the Air Force, and the Navy demonstrated that sensors integrated on remotely piloted aircraft can provide an effective research and development platform for the Ballistic Missile Defense System.

We conducted a series of ground and flight tests through FY 2011. These demonstrations incrementally showed cueing from external sensors, automatic acquisition of a target, and auto-tracking of a target throughout its flight with airborne sensors.

The Agency developed the sensors for integration and the Air Force provided the remotely piloted vehicles.

B. Program Change Summary ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	111.671	46.877	49.948	-	49.948
Current President's Budget	71.550	-	-	-	-
Total Adjustments	-40.121	-46.877	-49.948	-	-49.948
• Congressional General Reductions	-0.527	-			
• Congressional Directed Reductions	-	-46.877			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-35.000	-			
• Reprogrammings	-0.022	-			
• SBIR/STTR Transfer	-4.572	-			
• Other Adjustment	-	-	-49.948	-	-49.948

Change Summary Explanation

The FY 2011 reductions reflect the Department of Defense and Full Year Continuing Appropriation Act, FY 2011 (Public Law 112-10) and a realignment of Department of Defense priorities.

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APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0604884C: *Airborne Infrared (ABIR)*

In the Consolidated Appropriation Act of 2012 (Public Law 112-74), Airborne Infrared (PE 0604884C) has zero funding. The Agency will conduct an orderly drawdown of the program.

FY 2013 reduction reflects changes provided in the Consolidated Appropriation Act of 2012 (Public Law 112-74),

Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency			DATE: February 2012
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COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
MD67: *Airborne Infrared (ABIR)*	71.550	-	-	-	-	-	-	-	-	0.000	71.550
Quantity of RDT&E Articles	1	0	0		0	0	0	0	0		

Note

N/A

A. Mission Description and Budget Item Justification

Since March 2009, the Airborne Infrared Sensors program office, in conjunction with the Office of the Secretary of Defense, the Air Force, and the Navy demonstrated that sensors integrated on remotely piloted aircraft can provide an effective research and development platform for the Ballistic Missile Defense System.

We released an Alternatives Assessment study that concluded airborne sensors integrated on remotely piloted vehicles are technically feasible and cost effective research and development platforms. From the results of this study, we selected the Multi-spectral Targeting Sensor for our experiments and demonstrations due to its proven performance in an operational environment. They have two color, medium and long wave bands we need to single out the enemy`s threat vehicles from decoys. The United States Air Force conducted a platform assessment and selected the MQ-9 Reaper for our campaign.

We demonstrated through incremental improvements sensor sensitivity, pointing, and timely delivery of tracking information from great distances on targets of opportunity that included Intercontinental Ballistic Missiles and tactical missiles. Results of these tests included demonstrating the ability to: acquire from a cue and automatically track first and second stage booster separation; track dim targets; and pass real time object sighting messages to the ground stations.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: ABIR	71.550	-	-
Articles:	1	0	0
Description: See Description Below			
FY 2011 Accomplishments: -Executed four Ballistic Missile Defense (BMD) tests using Airborne Infrared sensors and systems -Demonstrated ability to acquire from an external cue and auto-track ballistic targets -Demonstrated transmission of real time object sighting messages to Command, Control, Battle Management, and Communications (C2BMC) -Validated Multi-spectral Targeting System-B (MTS-B) fire control quality of service tracks through post test fusion with Space Tracking and Surveillance System (STSS) sensors -Demonstrated automatic airborne control of the sensor with the airborne processor -Integrated National Security Administration Type 1 encryption systems on the MQ-9 and ground segment			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency		DATE: February 2012
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
-Conducted two radiometric calibration tests on the Airborne Infrared MTS-B sensor -Delivered two MTS-B infrared sensors ***FY 2012 Plans:*** Orderly drawdown of the program ***FY 2013 Plans:*** Not Applicable			
Title: ABIR Fielding ***Articles:*** ***Description:*** See Description Below ***FY 2011 Accomplishments:*** Site planning and associated designs ***FY 2012 Plans:*** Not Applicable ***FY 2013 Plans:*** Not Applicable	- 0	- 0	- 0
Accomplishments/Planned Programs Subtotals	71.550	-	-

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• 0603884C: *Ballistic Missile Defense Sensors*	389.259	222.075	347.012		347.012	327.342	362.520	341.780	326.095	Continuing	Continuing
• 0603896C: *Ballistic Missile Defense Command and Control, Battle Management & Communication*	454.440	363.640	366.552		366.552	376.116	383.055	358.431	364.725	Continuing	Continuing

D. Acquisition Strategy

The acquisition strategy consisted of three focus areas. First, leverage the technical expertise of Federally Funded Research and Development Centers and University Applied Research Centers. Second, continue to leverage relevant Office of the Secretary of Defense, Navy, Air Force and Agency contracts within the limits of

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Competition and Contracting Act taking into account contractor past performance, scope, ceiling and period of performance. Third, seek industry solutions via the Agency`s Broad Agency Announcement.

E. Performance Metrics

Not Applicable

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency		DATE: February 2012
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ABIR Air Vehicle	C/CPFF	General Atomics:Poway, CA	11.800	-		-		-		-	0.000	11.800	11.800
ABIR Sensor Development; ABIR Software builds; requirements and processor hardware	C/CPFF	Raytheon:McKinney, TX	12.065	-		-		-		-	0.000	12.065	12.065
ABIR Algorithms and software builds; processor hardware	C/CPFF	Massachusetts Institute of Technology Lincoln Lab:Lexington, MA (FFRDC)	11.156	-		-		-		-	0.000	11.156	11.156
ABIR Sensor Characterization	C/CPFF	Arnold Engineering Development Center:Arnold Air Force Base, TN	1.021	-		-		-		-	0.000	1.021	1.021
ABIR Sensor Characterization - 2012152839913	C/CPFF	Space Dynamic Lab:Logan, UT	4.031	-		-		-		-	0.000	4.031	4.031
		Subtotal	40.073	-		-		-		-	0.000	40.073	40.073

Remarks

N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	-	-		-		-		-	0.000	0.000	0.000

Remarks

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency		DATE: February 2012
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Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ABIR System Test and Evaluation	C/CPFF	Raytheon:General Atomics	4.806	-		-		-		-	0.000	4.806	4.806
		Subtotal	4.806	-		-		-		-	0.000	4.806	4.806

Remarks

N/A

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ABIR Program Management	Allot	Missile Defense Agency:Air Force/ Other Government Agency`s	26.671	-		-		-		-	0.000	26.671	26.671
		Subtotal	26.671	-		-		-		-	0.000	26.671	26.671

Remarks

N/A

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	71.550	-		-		-		-	0.000	71.550	71.550

Remarks

NA

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Missile Defense Agency		DATE: February 2012
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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0604884C: *Airborne Infrared (ABIR)*	**PROJECT** MD67: *Airborne Infrared (ABIR)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Demonstrated improved tracking performance with Missile Defense Agency`s MTS software delivery	1	2011	1	2011
Delivered autonomous acquisition and track of MTS sensor	3	2011	3	2011
Demonstrated autonomous control of MTS sensor	3	2011	3	2011
MTS-B infrared sensors delivered	3	2011	3	2011
Performed MTS infrared metric calibration	4	2011	4	2011